

Coffein and theobromin.—In a detailed account of his studies on the genera *Coffea*, *Thea*, *Theobroma*, and *Cola*, WEEVERS answers for the first time these questions:²⁵ Do coffein and theobromin arise in connection with the proteid metabolism of the plant or not? If so, do they arise through analysis or synthesis of proteids, and can they be used in proteid synthesis? He concludes that both are produced in consequence of secondary processes of dissimilation, that they are stored for a longer or shorter time, and then are again used in proteid synthesis. They constitute a very compact means of storing N, as they contain about 30 per cent. N as compared with 19 per cent. or less in proteids, and this is doubtless the reason why they occur so abundantly in seeds, though they may have also a protective function.—C. R. B.

Desert vegetation in South Africa.—The country of *Welwitschia* has always seemed fascinating to botanical travelers. Its accessibility is not fully realized; not only is it near the coast, but the heart of the desert is traversed by a railroad which has a station named *Welwitsch* from the abundance of the remarkable gymnosperm in the region thereabouts. PEARSON²⁶ has given an account of a journey through a part of German Southwest Africa, in which there is a description of the coastal strip with *Ancathosicyos horrida*, the Namib plains with *Welwitschia*, and the dry river beds with a less xerophytic vegetation closely resembling the *Acacia* vegetation farther east. Near Windhuk, the seat of government, there are *Acacia* park forests, in which *Acacia giraffae* is the predominating species.—H. C. COWLES.

Root-parasitism.—BARBER²⁷ has continued his studies of the haustorium of *Santalum album*. In the first paper²⁸ the early stages up to penetration were described; while the present paper deals with the mature haustorium. The penetration of the haustorium, its general structure, and its relation to the host tissues are first described. Then follow detailed descriptions of the cortex and "nucleus," the vascular system and its connections with the host, the character and development of the "sucker" with its double function of secretion and absorption, cases of irregular penetration, the general activity of the haustorium, and the interrelations of host and parasite. The numerous plates serve to make the descriptions remarkably clear.—J. M. C.

Taiwania.—HAYATA described this new genus of Coniferales from the Island of Formosa in 1906,²⁹ from a few dry branches bearing cones. Since that time he

²⁵ WEEVERS, TH., Die physiologische Bedeutung des Koffeins und des Theobromins. Ann. Jard. Bot. Buitenzorg 21:1-78. 1907.

²⁶ PEARSON, H. H. W., Some notes on a journey from Walfish Bay to Windhuk. Kew Bull. 1907:339-360.

²⁷ BARBER, C. A., Studies in root-parasitism. The haustorium of *Santalum album*. II. Mem. Depart. Agric. India Bot. 1:no. 12. pp. 58. pls. 15. 1907.

²⁸ BOT. GAZETTE 40:159. 1905 and 42:317. 1906.

²⁹ Jour. Linn. Soc. Bot. 32:330-332. pl. 16.